

What is claimed is:

1. An active noise control circuit comprising:

5 feed-forward control means for being supplied with a reference signal highly correlated to noise from a noise source and generating a noise cancellation signal which is out of phase to noise in the passenger compartment of a vehicle;

canceling sound generating means disposed in the passenger compartment for generating a noise canceling sound in response to the noise cancellation signal from said feed-forward control means; and

15 a microphone disposed at an antinode of an acoustic normal mode of the passenger compartment, for generating an output signal as the reference signal.

20 2. An active noise control circuit according to claim 1, wherein said antinode of the acoustic normal mode of the passenger compartment comprises an antinode in a primary mode or a secondary mode in a longitudinal direction of the passenger compartment.

3. An active noise control circuit comprising:

25 feed-forward control means for being supplied with a reference signal highly correlated to noise from a noise source and generating a noise cancellation signal which is out of phase to noise in the passenger compartment of a ve-

hicle;

canceling sound generating means disposed in the passenger compartment for generating a noise canceling sound in response to the noise cancellation signal from said feed-forward control means; and

a plurality of microphones for confirming cancellation of the noise in the passenger compartment;

said feed-forward control means comprising means for lowering the levels of output signals from said microphones with the noise cancellation signal;

said microphones being positioned respectively near laterally spaced roof rails of the vehicle in confronting relationship to ears of occupants seated in the passenger compartment.

4. An active noise control circuit comprising:

feed-forward control means for being supplied with a reference signal highly correlated to noise from a noise source and generating a noise cancellation signal which is out of phase to noise in the passenger compartment of a vehicle;

canceling sound generating means disposed in the passenger compartment for generating a noise canceling sound in response to the noise cancellation signal from said feed-forward control means; and

a microphone for confirming cancellation of the noise in the passenger compartment;

said feed-forward control means comprising means for lowering the level of an output signal from said microphones with the noise cancellation signal;

said microphone being positioned substantially centrally between laterally spaced roof rails of the vehicle in confronting relationship to the ear on the compartment side of an occupant seated in the passenger compartment.

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5. An active noise control system according to claim 3 or 4, further comprising a microphone disposed near a central console in the passenger compartment.

6. An active noise control system comprising:
a microphone positioned at an antinode of a primary or secondary acoustic normal mode of the passenger compartment of a vehicle;

canceling sound generating means disposed in the passenger compartment for generating a noise canceling sound; and

a feedback control circuit for being supplied with an output signal from said microphone and generating an output signal to energize said canceling sound generating means.

7. An active noise control system according to claim 6, wherein said feedback control circuit has an adjusting circuit for adjusting the amplitude and phase of the output signal from said microphone to generate a noise cancellation

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signal which is of the same sound pressure as, but out of phase to, noise at the microphone.

5 8. An active noise control system according to claim 6, wherein said microphone is disposed beneath a front seat in the passenger compartment.

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9. An active noise control system according to claim 6, further comprising a storage box, said microphone and said feedback control circuit being housed in said storage box, said storage box being disposed beneath a front seat in the passenger compartment.

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10. An active noise control system according to claim 6, wherein said storage box has holes defined therein for the passage of noise in the passenger compartment.